

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Previously Presented). A speaker apparatus comprising:

a primary coil disposed in the vicinity of a gap of a magnetic circuit and to which a current corresponding to an input audio signal is supplied;

a secondary coil, disposed in the gap, for inducing a current corresponding to a current that flows in said primary coil; and

a vibrating plate vibrated by said secondary coil with an interaction of the current induced by said secondary coil and a magnetic flux in the gap,

wherein the following formula is satisfied

$$N \times (R1 \times R2)^{1/2} / \{2\pi \times L1 \times (1 - k^2)^{1/2}\} \geq 20000 \quad \text{Hz}$$

where R1 is the DC resistance of said primary coil; L1 is the DC resistance of said primary coil; L1 is the inductance of said primary coil; N is the number of turns of said primary coil; R2 is the DC resistance of said secondary coil; and k is the coupling coefficient of said primary coil and said secondary coil.

Claim 2 (Currently Amended). The speaker apparatus as set forth in claim 1, wherein R1, L1, N, R2, and k satisfy the following formula at a frequency f in a desired reproduction frequency band

$$2\pi \times f \times L1^2 \times \cancel{(N^2 \times R2 + L1 \times R1)} \frac{(N^2 \times R2 + R1)}{(N^2 \times X^2)} \geq 0.3$$

$$X = \frac{(2\pi \times f)^2 \times \cancel{(L1 \times R1 + L1 \times R1/N^2)}^2 \times \frac{L1 \times R2 + L1 \times R1/N^2}{R1/N^2}}{+ \{-R1 \times R2 + (2\pi \times f)^2 \times L1^2 \times (1-k^2) / N^2\}^2}$$

Claims 3-4 (Canceled).